DERWENT-ACC-NO: 1986-128541

DERWENT-WEEK: 198620

TITLE: Super-high mol. wt. polyethylene film prepn. - by forming dispersion in organic solvent, heating, extruding, solvent evaporation and cooling

PATENT-ASSIGNEE: MITSUBISHI MONSANTO KK[MITT]

PRIORITY-DATA: 1984JP-0190403 (September 11, 1984)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 61066624 A	April 5, 1986	N/A	006	N/A
JP 92047608 B	August 4, 1992	N/A	005	B29C 047/78

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
JP 61066624A	N/A	1984JP-0190403	September 11, 1984
JP 92047608B	N/A	1984JP-0190403	September 11, 1984
JP 92047608B	Based on	JP 61066624	N/A

INT-CL (IPC): B29C047/40, B29C047/78 , B29C047/92 , B29K023/00 , B29K023:00 , B29L007/00 , B29L007:00 , C08J003/20 , C08J005/18

ABSTRACTED-PUB-NO: JP 61066624A

BASIC-ABSTRACT:

Film or sheet of super-high mol. wt. polyethylene having ave.

mol. wt. of at least 1,000,000 is prepd. by (A) adding super-high mol. wt. polyethylene to organic solvent to provide dispersion or mixt. contg. 10-80 wt.% of the polyethylene, (B) heating this dispersion or mixt. at a temp. at least the m.pt. of the dispersion or mixt. to melt it and extruding the dispersion into film or sheet through biaxial extruder,(C) evaporating the organic solvent by heating the film or sheet and (D) cooling the film or sheet.

The organic solvent is pref. p-xylene, decalin, octalin, tetrachloroethane, for dissolving or swelling the polyethylene.

USE/ADVANTAGE - The process provides efficiently high mol. wt. polyethylene film or sheet having smooth surface.

In an example polyethylene (Hi-zex Million 240M having wt. ave. mol. wt. of about 3,000,000 and ave. particle size of about 100 micron and available from MITC) was added to p-xylene to the concn. of 50 wt.%, at room temp., to provide slurry. The slurry has peak temp. of 120 deg.C, as measured by differential scanning calorimeter in accordance with ASTM D 3417-82. The slurry was extruded through biaxial extruder having slit die, at cylinder temp. of 180 deg.C, die temp. of 200 deg.C, 10 rpm. and extruding rate of 0.2 kg/min. to provide 1.2 mm-thick and 40 mm-wide sheet. The sheet was heated in an oven at 180 deg.C for 10 min. to evaporate p-xylene and then cooled to provide polyethylene sheet having thickness of 1.15 mm and width of 38 mm.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: SUPER HIGH MOLECULAR WEIGHT POLYETHYLENE FILM PREPARATION FORMING DISPERSE ORGANIC SOLVENT HEAT EXTRUDE SOLVENT EVAPORATION COOLING

DERWENT-CLASS: A17 A32

CPI-CODES: A04-G02C; A11-A; A11-B07A; A11-B07D; A12-S06A; A12-S07;

POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:
Key Serials: 3003 0211 0229 0239 0247 2318 2336 2368 2375 2378 2386 2393 2451
2503 2507 2513 2522 2585 2661
Multipunch Codes: 014 03- 041 046 047 049 13- 316 332 369 392 397 398 402 408
409 414 415 42- 423 427 435 450 502 575 583 589 597 602 688 726

SECONDARY-ACC-NO:
CPI Secondary Accession Numbers: C1986-054907

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
1	IS&R	L3	1	("5422061").PN.	USPAT; US-PGPUB	2003/07/29 11:58	
2	BRS	L4	3	"Hi-Zex 5000H" or "Sholex-SUPER"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/29 11:05	
3	BRS	L5	115	"Hi-Zex" or "Sholex-SUPER"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/29 11:08	
4	BRS	L6	1	"Sholex-SUPER"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/29 11:14	
5	BRS	L7	2	"Lubmer L5000P"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/29 11:15	
6	BRS	L8	2	"Lubmer L3000P"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/29 11:22	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
7	BRS	L9	552498	polyethylene or (ethylene adj polymer) and (wear adj resistance)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/29 11:29	
8	BRS	L10	25980	9 and sliding	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/29 11:31	
9	BRS	L11	1297	10 and (ultra adj high adj molecular adj weight)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/29 11:29	
10	BRS	L12	5229	(polyethylene or (ethylene adj polymer)) same (ultra adj high adj molecular adj weight)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/29 11:59	
11	BRS	L13	162	12 same (wear adj resistance)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/29 11:31	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
12	BRS	L14	58	13 and sliding	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/29 11:31	
13	BRS	L15	2	(polyethylene or (ethylene adj polymer)) same (molecular adj weight) same (wear adj coefficient) and sliding	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/29 12:00	